

PO No	Supplier	Line Item No	Ref No	Terms	Purchased Item	Description	For Part No	Project	Equipment ID	Order Qty	Due Date	Received Quantity	Accounting Job No	Serial No	Status	Receive Date	Price/Unit	Aging Days	Past Due	Total	Supplier Name
PO038332	TWM001-VU	1	1	Net 30	M4130NT0.750W.049	4130, Round Tube, .750 X.049W : MATERIAL: AISI 4130N STEEL TUBING AS PER MIL-T-6736 OR AMS 6371/6360/6381/6362 6373/6374 receive ft				100	11/20/2017	96		S010523	Stock	11/16/2017	\$ 6.00 / ft.	0		\$574.01	TVW Metals
Total: 100																				\$574.01	

Plex 11/16/2017 9:23 AM Dart.Plouffe.Sonia

Status: Receiving

Part: **M4130NT0.750W.**

Created: 11/16/17 9:22 AM DART.PLOUFFE.S



Serial No: **S010523**



Dart Hawkesbury  
1270 Aberdeen St  
Hawkesbury, ON  
K6A 1K7  
Canada

Tel (613) 632-5200

**PURCHASE ORDER  
PO038332**

<b>Supplier:</b>	TWM001-VU TW Metals PO Box 933014 Atlanta, GA 31193-3014 USA Phone: 585 768 5600 Fax: 585 768 5601	<b>PO No:</b>	PO038332
		<b>PO Date:</b>	11/10/17
		<b>Due Date:</b>	11/20/17
		<b>Purchase Order Revision:</b>	
		<b>Revision Date:</b>	
		<b>Ship-To Contact:</b>	Phone:
<b>Ship To:</b>	1270 Aberdeen Street Hawkesbury ON K6A 1K7 Canada Phone: 613-632-5200	<b>Via:</b>	Ground
		<b>Pymt Terms:</b>	Net 30
		<b>Freight Terms:</b>	
		<b>Special Comments:</b>	

E-MAILED  
NOV 10 2017

Items											
Line Item	Part	Rev	Description	Item Tax	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
1	M4130NT0.750W.049	-	4130 Round Tube .750 X.049W : MATERIAL: AISI 4130N STEEL TUBING AS PER MIL-T-6736 OR AMS 6371/6360/6361/6362 6373/6374 receive ft		Firmed	11/20/17	100 ft	0 ft	100 ft	\$6.00/ft	\$600.00
2	M304P0.675W.091	-	304/316 Pipe .675 OD x .091 Wall Thickness : MATERIAL: TP304/TP316 STAINLESS STEEL SEAMLESS PIPE AS PER ASTM A312/ASME SA312 receive ft		Firmed	11/20/17	20 ft	0 ft	20 ft	\$5.00/ft	\$100.00

Grand Total: \$700.00

**Order Notes**

*CZ*  
Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit [www.dartaerospace.com](http://www.dartaerospace.com) for further explanation.

Plex 11/10/17 1:56 PM dart.lavoie.chantal



O'Neal High-Performance Metals Group

Packing  
Slip

ORDER NO.: 60643887 FROM: CRAN PAGE 1

CUST NUMBER: 1203820 NET WGT: 35.083 REQ. DATE: 11/17/17 CONFIRMED  
 SOLD TO:  
 DART AEROSPACE LTD  
 1270 ABERDEEN ST  
 HAWKESBURY ON  
 CANADA CN K6A 1K7  
 CN K6A 1K7

SALESPERSON: DONNA SMALLEY SHIP BY: 11/13/17  
 TERMS: NET 30 DAYS VIA: COMMON CARRIER  
 F.O.B.: SHIPPING POINT FREIGHT: PREPAID  
 CUST ORD NO.: PO038332 RELEASE NO.:  
 RECEIVING PHONE:

LINE	ITEM DESCRIPTION	WIDTH	LENGTH
0001	33047 CDS 4130 6736 3/4 X .049	17/24 FT	

CLN#	ORD QTY	INVOICE QTY	SHIPPED QTY	WT	PCS
	100.000 FT	95.668 FT	95.668 FT	35.083	

\*\* 1 TEST REPORTS REQUIRED \*\*

\*\* 1 CERTS REQUIRED \*\*

ECCN: 9A991.d Export License: NLR Expiration Date: 0/00/00  
 PO:49368990 HT:602196 PC: 4 CUSTOMER QTY: UOM  
 MLT:GERMANY MFG:GERMANY SLB/CL:1637185

BROKERS KUEHNE AND NAGEL LTD

SPL11-16

PACK INFO					
AREA	TYPE OF PKG	PKGS	GRS	WEIGHT	WIDTH
NEW PEN CARTON	Orders In Package - 1	1.000	60.083	3.0000	293.0000
		Box No -	TWPK17008758		
		1.000	60.083		

BY: Tom Weaver  
 RT 000-

UNLOAD TYPE: NONE SPECIFIED

DATE SHIPPED \_\_\_\_\_

1

DATE FILLED \_\_\_\_\_

THANK YOU FOR THIS ORDER

TERMS AND CONDITIONS APPLICABLE TO THE SALE OF THESE  
 PRODUCTS ARE SET FORTH ON OUR WEBSITE FOR YOUR CAREFUL  
 REVIEW.  
<http://www.twmetals.com/invoice-terms.html>



O'Neal High-Performance Metals Group



**Packing  
Slip**

ORDER NO.: 60643887      FROM: CRAN      PAGE 2

CUST NUMBER: 1203820	NET WGT:	35.083	REQ. DATE: 11/17/17	CONFIRMED
SOLD TO: DART AEROSPACE LTD 1270 ABERDEEN ST HAWKESBURY ON CANADA		SHIP TO: DART AEROSPACE LTD 1270 ABERDEEN ST HAWKESBURY ON ONTARIO CANADA		
CN K6A 1K7		CN K6A 1K7		
SALESPERSON:	DONNA SMALLEY	SHIP BY:	11/13/17	
TERMS:	NET 30 DAYS	27 ENGLEHARD DRIVE		
F.O.B.:	SHIPPING POINT	MONROE TWP	NJ 08831	
CUST ORD NO.:	PO038332			
VIA:	COMMON CARRIER			
FREIGHT:	PREPAID			
RELEASE NO.:				
RECEIVING PHONE:				

"TW Metals MSDS data is available on our web site at [www.twmetals.com](http://www.twmetals.com). MSDS data can be found under the Technical Resources Tab, Product Statistics & Data and the TW Metals MSDS's heading. If you do not have web site access you may telephone 610-458-1300 and we will mail or fax a copy of our current MSDS data to your location."

**"CERTIFICATE OF CONFORMANCE"**

"TW Metals certifies that the material supplied on this purchase order and contained in the heat/lot number referenced above has been manufactured, inspected, and tested in accordance with the material specification. These records are on file at TW Metals. Packaging material for shipments to Europe and China consists of manufactured wood products and complies with the European emergency measures for coniferous non-manufactured wood packing material"

Authorized Test Report Clerk Cyril March      Date: 11/10/17

These commodities have been exported from the United States in accordance with the U.S. export control laws, export administrations regulations. Diversion contrary to U.S. law prohibited.

**BENTELER**   
Steel/Tube

Benteler Stiel/Tube GmbH  
Postfach 13 40  
D-33043 Paderborn  
Deutschland

AEZ = Azenothrombosierung, Eiabgang zur mensch. Genitalia & Urethra - FK = Fokussierung, color - reading, aufgezogener peripherer - FS = Farbabschattung, rötlich, sonst schwarz - KF = Kolorimetrische Farbabschattung - LK = Lassenspaziergang, Lasserschattung, Abreagieren lösbar - PKL = Röhrchenkolorimetrische Farbabschattung - TS = Teststreifenabschattung, teil. bei spray markiert, Impfstoff & H1C - Cenovis.

Benteler Stahl/Tube GmbH  
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33043 Paderborn  
Deutschland  
Tel.: +49 5254-81-0 Fax: +49 5254-13666

# BENTELER ▶

## Steel/Tube

### ABNAHMEPRÜFZEUGNIS EN 10204-3.1

INSPEKTION CERTIFICATE EN 10204-3.1  
CERTIFICAT DE RECEPTION EN 10204-3.1

Dokument-Nr.:  
Document N.º:  
No. du document:

41-1013940/001/Z  
Inspection N.º:  
No. du certificat:

Blatt: 2 / 4  
Page:  
Page:

Steel/Tube

Pos.	Stück	Maße	Dimensions	Gesamtlänge	Gewicht	Schmelzen-Nr.	Prüfdruck	Rohr-Nr.-Gruppe	Vielfachlängen
Item.	Heat No.	Number	Dimensions	Length total/ Longueur totale	Weight Poids	Heat N.º: No. de coulée	Test pressure Préssion d'épreuve	Tube number group Série de N.º des tubes	Multiple lengths Longueurs multiples
0008	120	0,750" O.D. * 0,049" WT	20 FT - 24 FT	2874,02	1049	602196			
0008	120	0,750" O.D. * 0,049" WT	20 FT - 24 FT	2877,95	1054	603839			

### Schmelzenanalyse [%] / Heat analysis [%] / Analyses sur coulée [%]

Pos.	Schmelzen-Nr.	C	Si	Mn	P	S	CR	Mo	Ni	CU
Item.	Heat No.	Chem. No.	Heat N.º: No. de coulée.	Chem. No.						
0008	602196	0,220	0,260	0,55	0,006	0,001	0,89	0,18	0,09	0,12
0008	603839	0,320	0,270	0,54	0,008	0,003	0,88	0,17	0,10	0,12

### Produktanalyse [%] / Product analysis [%] / Analyse sur produit [%]

Pos.	Schmelzen-Nr.	C	Si	Mn	P	S	CR	Mo	Ni	CU
Item.	Heat No.	Chem. No.	Heat N.º: No. de coulée.	Chem. No.						
0008	602196	0,310	0,280	0,56	0,009	0,001	0,89	0,19	0,09	0,17
0008	603839	0,320	0,270	0,54	0,009	0,003	0,88	0,17	0,09	0,11

### Prüfergebnisse / Test results / Résultats des essais

Die Röhre wurden zerstörungsfrei geprüft:

The tubes are non destructive tested:

Les tubes ont passé un essai non destructif:

ET-test: acc. to ASTM-A 450; ET - Test method: acc. to ASTM-E 309; for imperfections  
ET-test: ET with rotating pancake coils; according to EN 10246-3; Imperfections;  
Notch depth: 0,50 mm; notch width < = notch depth, notch length min. 2 x transducer  
width (max. 50 mm)

Augensichtskontrolle:	PASSED	Materialverwechslungsprüfung:	PASSED	Maßkontrolle:	PASSED
Visual inspection:		Material conformity test:		Dimensions examination:	
Examen visuel:		Vérification de la matière:		Vérification des dimensions:	



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Deutschland  
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**BENTELER** 

Steel/Tube

**ABNAHMEPRÜFZEUGNIS EN 10204-3.1**  
INSPECTION CERTIFICATE EN 10204-3.1  
CERTIFICAT DE RECEPTION EN 10204-3.1

Ergebnisse der mechanischen Prüfung / Results of mechanical testing / Résultats des essais mécaniques

Die Probenahme erfolgte an Vielfachlängen.

The sampling was carried out on multiple lengths.

L'échantillonage était réalisé sur longueurs multiples.

Zugversuch längs bei RT. Vollstäbte / Tensile / Tension test specimen / Essai de traction longitudinale à TA. Epreuve à section complète

Pos. Requisiten Ergänztes	Proben-Nr. Specimen No. Poste No. de l'épreuve	Schmelzen-Nr.- Haut No. No. de l'épreuve	Probenabmessung Specimen dimensions Dimensions de l'épreuve	Streckgrenze Yield strength Limite élastique	Zugfestigkeit Tensile strength Résistance à la traction	Dehnung Elongation Allongement	Prüf-Nr.: Document No.: No. du document:		Prüf-Nr.: Inspection No.: No. du certificat:	Blatt: 3 / Page: Page:
							Rp 0,2 % mm	Rm. ksi MIN 76	A2* % MIN 12,00	
0008	0000001	602196	19,05 X 1,25	116.	130	18,00				
0008	0000002	602196	19,05 X 1,25	118.	131	18,00				
0008	0000003	602196	19,05 X 1,25	116	130	16,00				
0008	0000001	603839	19,05 X 1,25	116	130	18,00				
0008	0000002	603839	19,05 X 1,25	118	131	18,00				
0008	0000003	603839	19,05 X 1,25	116	130	16,00				

Randentkohlung / Surface decarburization / Décarburation superficielle

Pos. / Item / Partie: 0008  
acc. to AMS-6360, partial decarburization outside max. 0,009 in, partial  
decarburization outside and inside max. 0,012 in, partial decarburization outside and inside max. 0,305 mm, without total  
decarburization; partial decarb. out. max.: 0,229 mm; partial decarb. ins. max.: 0,229 mm

Vermerk / Remark / Remarque

Pos. / Item / Partie: 0008

Certificate remarks: The steel grade corresponds to MIL-T-6736B, AMS 6380M, material free from mercury contamination, FAR BAA:  
52-225-1-CANNNOT COMPLY, DFARS BAA: 252-225-7001 CAN COMPLY, EAR TAA: 52-225-5 CAN COMPLY, No weld, repair has been carried out,  
Country of origin of the material and heat: Germany, Aircraft quality steel acc. to AMS 2301K, see appendix page 1 of 1

Pos. / Item / Partie: 0008

Macroscopic examination: acc. to ASTM-E 381

Pos. / Item / Partie: 0008

Magnetic particle inspection: acc. to AMS 2301K/ASTM-E 1444, on prematerial



AS

Benteler Steel/Tube GmbH  
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# BENTELER

Steel/Tube

ABNAHMEPRÜFZEUGNISS EN 10204-3.1  
INSPECTION CERTIFICATE EN 10204-3.1  
CERTIFICAT DE RECEPTION EN 10204-3.1  
Pos. / Item / Poste: 0008  
Grain size: acc. to ASTM-E 112; Grain size: finer; 5; Grain size: Longitudinal structure: micrography, on prematerial

Verkäufer(in) / Sales Personnel / Personne chargeé : Mr Schwarz, Tel.: 05254 81-204311, Fax: 204391

Steel/Tube		Dokument-Nr.:	Print-Nr.:	Blatt:
Document No.:	41-1013940/001/2	Inspection No.:	4 / 4	Page:
No. du document:		No. du certificat:		Page:



Paderborner Schloss Neuhaus, 30.08.2017, TEL.: 05254.81-201767 FAX: 05254.81-201752

Abnahmbeauftragter

Inspection representative

Consigneur

I. A. THOMAS GOLLAN / TEM

Es wird bestätigt, dass das gelieferte Erzeugnis den techn. Lieferbedingungen des Auftrages entsprechen. Dieses Dokument wurde mittels EDV erstellt und ist ohne Unterschrift mehrfachig.  
We certify that the supplied products comply with the order specification. This document was prepared by means of electronic data processing and is valid without signature.  
Nous attestons que les produits livrés sont conformes aux stipulations de la commande. Ce document a été établi par plusieurs éditions de l'information et est valide sans signature.

Benteler Steel/Tube GmbH  
Residenzstraße 1  
33104 Paderborn  
Germany  
Tel: 05254.81-0 Fax: 05254.15866

# BENTELER ▼

## Steel/Tube

Abnahmeprüfzeugnis EN 10204-3.1 / Anhang  
Inspection Certificate EN 10204-3.1 / appendix  
Certificat de réception EN 10204-3.1 / appendice.

Halbzeuguntersuchung: Stahlsorte: 4130 / Semi finished product examination: grade 4130 / Produit semi-fin: nuance 4130

Dokument-Nr.  
Document No.:  
No. de document:

41-1013940/001/Z

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Page: 1 of 1  
Page:

Schmelzen-Nr. Heat No. Coulée No.	Position Item Poste	Korngröße Grain size Grossesse de grain (ASTM-E 112)	Härtbarkeit (min. Anforderungen) Hardenability (min. requirements) Tramabilité (exigence min.) (ASTM-A 255)	Magnetröpfchenprüfung Magnetic particle inspection Essai de macrotélerature (AMS 2301 K/ASTM-E 1444)		Macroprüfung Macrostructure test Essai de macrostructure (ASTM-E 381)			
				min. 5. min. 35 HRC	J(5/16") min. 28 HRC	F max. 0,34	S max. 0,25	max. S.2.	max. R.1
602196	008	9	44	34	0,020	0,015	S2	R1	C2
Decarburization Depth		Outside 0,000 mm	Inside 0,000 mm						
6036839	008	9	38	31	0,020	0,020	S2	R1	C2
Decarbürization Depth		Outside 0,000 mm	Inside 0,000 mm						

Der Stahl ist frei von Quecksilberverunreinigungen. / The steel is free of mercury contamination. / L'acier est libre des contaminations de mercure.

Paderborn Schloß Neuhaus, 30.06.2017  
Tel.: (05254.81-201760 Fax: (0)5254.81-201752

Abnahmbeauftragter  
Inspection représentative  
Contrôleur

Thomas Gößen

